



App No.: 10/008264 Docket No.: HUI-040CP  
Inventor: Laurie H. GLIMCHER et al.  
Title: T-BET COMPOSITION AND METHODS OF USE THEREOF  
REPLACEMENT SHEET

SEQ ID NO:2 HUMAN MGIVEPGCGDMLTGTEPMGSDEGRAPGADPQHRYFYPEPEGAQDADERRGGGSLGSPYPG  
SEQ ID NO:4 MOUSE MGIVEPGCGDMLTGTEPMPSDEGRGPAGQQHRRFFYPEPEGAQDPTDRAGSSLGTPYSG  
10 20 30 40 50 60  
10 20 30 40 50  
CONS MGIVEPGCGDMLTGTEPMPSDEGR PGAD QHR FYPEPEGAQD RR G SLG PY G

SEQ ID NO:2 HUMAN GALVPAPPSSRFLGAYAYPPRPQAAGFPAGESFPPPADAEGYQPGEGYAAPDPRAGLYPG  
SEQ ID NO:4 MOUSE GALVPAAPGRFLGSFAYPPRAQVAGFPGPGEFFPPPAGAEGYPPVDGYPAPDPRAGLYPG  
60 70 80 90 100 110 120  
60 70 80 90 100 110  
CONS GALVPA P RFLG AYPPR Q AGFPAG FPPA AEGY P GY APDPRAGLYPG

SEQ ID NO:2 HUMAN PREDYALPAGLEVSGKLRLVALNNHLLWSKFNQHQTEMIITKQGRRMFPFLSFTVAGLEPT  
SEQ ID NO:4 MOUSE PREDYALPAGLEVSGKLRLVALNHLLWSKFNQHQTEMIITKQGRRMFPFLSFTVAGLEPT  
130 140 150 160 170 180  
120 130 140 150 160 170  
CONS PREDYALPAGLEVSGKLRLVAL NHLLWSKFNQHQTEMIITKQGRRMFPFLSFTVAGLEPT

SEQ ID NO:2 HUMAN SHYRMFVDVVLVDQHHWRYQSGKWKVQCGKAEGSMPGNRLYVHPDSPNTGAHWMRQEVSFG  
SEQ ID NO:4 MOUSE SHYRMFVDVVLVDQHHWRYQSGKWKVQCGKAEGSMPGNRLYVHPDSPNTGAHWMRQEVSFG  
190 200 210 220 230 240  
180 190 200 210 220 230  
CONS SHYRMFVDVVLVDQHHWRYQSGKWKVQCGKAEGSMPGNRLYVHPDSPNTGAHWMRQEVSFG

SEQ ID NO:2 HUMAN KLKLTNNGASNNVTQMIVLQLSLHKYQPRLHIVEVNDGEPEAACNASNTHIFTFQETQFI  
SEQ ID NO:4 MOUSE KLKLTNNGASNNVTQMIVLQLSLHKYQPRLHIVEVNDGEPEAACSASNTHVFTFQETQFI  
250 260 270 280 290 300  
240 250 260 270 280 290  
CONS KLKLTNNGASNNVTQMIVLQLSLHKYQPRLHIVEVNDGEPEAAC ASNTH FTFQETQFI

Fig. 1A

SEQ ID NO:2      310      320      330      340      350      360  
**HUMAN** AVTAYQNAEITQLKIDNNPFAKGFRENFESMYTSVDTSIPSPPGPNCQFLGGDHYSPLL  
 SEQ ID NO:4      ::::::::::::::::::::: ::::::::::::::::::::: ::::::: :::::  
**MOUSE** AVTAYQNAEITQLKIDNNPFAKGFRENFESMYASVDTSVPSPPGPNCQLLGGDPFSPLLS  
 300      310      320      330      340      350

**CONS** AVTAYQNAEITQLKIDNNPFAKGFRENFESMY SVDTS PSPPGPNCQ LGGD FSPLL

SEQ ID NO:2      370      380      390      400      410      420  
**HUMAN** NQYPVPSRFYPDLPQAKDVVQAYWLGAPRDHSYAEFRAVSMKPAFLPSAPGPTMSYY  
 SEQ ID NO:4      ::::::::::::::::::::: :: : ::::::::::::::::::::: ::::::: :::  
**MOUSE** NQYPVPSRFYPDLPQPKDMISQPYWLGTPREHSYAEFRAVSMKPTLLPSAPGPTVPYY  
 360      370      380      390      400      410

**CONS** NQYPVPSRFYPDLPG Q YWLG PR HSYEAEFRAVSMKP LPSAPGPT YY

SEQ ID NO:2      430      440      450      460      470      480  
**HUMAN** RGQEVLAPGAGWPVAPQYPPKMGPASWFRPMRTLPMEPGPGGSEGRGPEDQGPPLVTEI  
 SEQ ID NO:4      ::::::::::::::::::::: ::::::::::::::::::::: :::: .. .: ..  
**MOUSE** RGQDVLAPGAGWPVAPQYPPKMSPAGWFRPMRTLPMDPGLGSSEEQG---SSPSLWPEV  
 420      430      440      450      460      470

**CONS** RGQ VLAPGAGWPVAPQYPPKM PA WFRPMRTLPM PG G SE G P W E

SEQ ID NO:2      490      500      510      520      530  
**HUMAN** APIRESSDSGLGEGDSKRRRVSPYPSSGDSSSPAGAPSFDKEAEGQFYNTFPN  
 SEQ ID NO:4      . . . . . ::::::::::::::::::::: ::::::::::::::::::::: :::::::  
**MOUSE** TSLQPEPSDSGLGEDKRRRISSPYPSSGDSSSPAGAPSFDKETEGQFYNYFPN  
 480      490      ↑↑↑ 500      510      520      530

**CONS** PE SDSGLGEGD KRRR SPYPSSGDSSSPAGAPSFDKE EGQFYNYFPN

Fig. 1B

SEQ ID NO:1	10	20	30	40	50	60
	<b>HUMAN ATGGGCATCGTGGAGCCGGGTTGCGGAGACATGCTGACGGCACCGAGGCCATGCCGGGG</b>					
SEQ ID NO:3	10	20	30	40	50	
	<b>MOUSE ATGGGCATCGTGGAGCCGGCTGCGGAGACATGCTGACCGCACCGAGGCCATGCC---G</b>					
SEQ ID NO:1	70	80	90	100	110	120
	<b>HUMAN AGCGACGAGGGCCGGGCGCCTGGCGCCGACCCGCAGCACCCTACTTCTACCCGGAGCCG</b>					
SEQ ID NO:3	60	70	80	90	100	110
	<b>MOUSE AGTGACGAGGGCCGGGGCCGGAGCGGACCAACAGCATCGTTCTTCTATCCCGAGCCG</b>					
SEQ ID NO:1	130	140	150	160	170	180
	<b>HUMAN GGCGCGCAGGACGCGGACGCGTCGCGGGGGCGGCAGCCTGGGTCTCCCTACCCGGGG</b>					
SEQ ID NO:3	120	130	140	150	160	170
	<b>MOUSE GGCGCACAGGACCCGACCGATCGCCGCGCAGGTAGCAGCCTGGGACGCCCTACTCTGGG</b>					
SEQ ID NO:1	190	200	210	220	230	240
	<b>HUMAN GGCGCCTTGGTGCCTGCCCGCCGAGCCGCTTCCTTGGAGCCTACGCCTACCCGCCGGA</b>					
SEQ ID NO:3	180	190	200	210	220	230
	<b>MOUSE GCGCCCTGGTGCCTGCCGCCGGTCGCTTCCTTGGATCCTCGCCTACCCGCCCGG</b>					
SEQ ID NO:1	250	260	270	280	290	300
	<b>HUMAN CCCCAGGCAGGCCGGCTTCCCCGGCGCGGGCGAGTCCTTCCGCCGCCGGACGCCGAG</b>					
SEQ ID NO:3	240	250	260	270	280	290
	<b>MOUSE GCTCAGGTGGCTGGCTTCCCCGGCCTGGCGAGTTCTTCCGCCGCCGGTGCAGGAG</b>					
SEQ ID NO:1	310	320	330	340	350	360
	<b>HUMAN GGCTACCAAGCCGGCGAGGGCTACGCCGCCGGACCCGCGCCGGCTCTACCCGGGG</b>					
SEQ ID NO:3	300	310	320	330	340	350
	<b>MOUSE GGCTACCCGCCGTGGATGGCTACCCCTGCCCTGACCCGCCGCCGGCTCTACCCAGGG</b>					
SEQ ID NO:1	370	380	390	400	410	420
	<b>HUMAN CCGCGTGAGGACTACGCGCTACCCGCCGGACTGGAGGTGTCGGGGAAACTGAGGGTCGCG</b>					
SEQ ID NO:3	360	370	380	390	400	410
	<b>MOUSE CCGCGCGAGGACTACGCATTGCCGCCGGTTGGAGGTGTCGGGAAGCTGAGAGTCGCG</b>					

Fig. 1C

SEQ ID NO:1	HUMAN	430	440	450	460	470	480
		CTCAACAAACCACCTGTTGGTCCAAGTTAACATCAGCACAGACAGAGATGATCATCAC	::::::::::: ::::::::::::::::::::: :: :: ::::::::::::::::::::: :::::				
SEQ ID NO:3	MOUSE	420	430	440	450	460	470
		CTCAGCAACCAACCACCTGTTGGTCCAAGTTAACACCAGCACAGACAGAGATGATCATCACT	::::::::::: ::::::::::::::::::::: :: :: ::::::::::::::::::::: :::::				
SEQ ID NO:1	HUMAN	490	500	510	520	530	540
		AAGCAGGGACGGCGGATGTTCCCATTCTGTCAATTACTGTGGCCGGCTGGAGCCCCACC	::::::::::: ::::::::::::::::::::: :: :: ::::::::::::::::::::: :::::				
SEQ ID NO:3	MOUSE	480	490	500	510	520	530
		AAGCAAGGACGGCGAATGTTCCCATTCTGTCTCACCGTGGCCGGCTGGAGCCCCACA	::::::::::: ::::::::::::::::::::: :: :: ::::::::::::::::::::: :::::				
SEQ ID NO:1	HUMAN	550	560	570	580	590	600
		AGCCACTACAGGATGTTGTGGACGTGGTCTTGGTGGACCAGCACCACTGGCGGTACCAAG	::::::::::: ::::::::::::::::::::: :: :: ::::::::::::::::::::: :::::				
SEQ ID NO:3	MOUSE	540	550	560	570	580	590
		AGCCATTACAGGATGTTGTGGATGTGGTCTTGGTGGACCAGCACCACTGGCGGTACCAAG	::::::::::: ::::::::::::::::::::: :: :: ::::::::::::::::::::: :::::				
SEQ ID NO:1	HUMAN	610	620	630	640	650	660
		AGCGGCAAGTGGGTGCAGTGTGGAAAGGCCGAGGGCAGCATGCCAGAAACCGCCTGTAC	::::::::::: ::::::::::::::::::::: :: :: ::::::::::::::::::::: :::::				
SEQ ID NO:3	MOUSE	600	610	620	630	640	650
		AGCGGCAAGTGGGTGCAGTGTGGAAAGGCAGAACGGCAGCATGCCAGGGAACCGCTTATAT	::::::::::: ::::::::::::::::::::: :: :: ::::::::::::::::::::: :::::				
SEQ ID NO:1	HUMAN	670	680	690	700	710	720
		GTCCACCCGGACTCCCCAACACAGGAGCGCACTGGATGCGCCAGGAAGTTTCATTTGGG	::::::::::: ::::::::::::::::::::: :: :: ::::::::::::::::::::: :::::				
SEQ ID NO:3	MOUSE	660	670	680	690	700	710
		GTCCACCCAGACTCCCCAACACCGGAGCCCACTGGATGCGCCAGGAAGTTTCATTTGGG	::::::::::: ::::::::::::::::::::: :: :: ::::::::::::::::::::: :::::				
SEQ ID NO:1	HUMAN	730	740	750	760	770	780
		AAACTAAAGCTCACAAACAAGGGGGCTCCAACAATGTGACCCAGATGATTGTGCTC	::::::::::: ::::::::::::::::::::: :: :: ::::::::::::::::::::: :::::				
SEQ ID NO:3	MOUSE	720	730	740	750	760	770
		AAGCTAAAGCTCACCAACAAGGGGGCTCCAACAATGTGACCCAGATGATCGTCCTG	::::::::::: ::::::::::::::::::::: :: :: ::::::::::::::::::::: :::::				
SEQ ID NO:1	HUMAN	790	800	810	820	830	840
		CAGTCCTCCATAAGTACCAAGCCCCGGCTGCATATCGTTGAGGTGAACGACGGAGGCCA	::::::::::: ::::::::::::::::::::: :: :: ::::::::::::::::::::: :::::				
SEQ ID NO:3	MOUSE	780	790	800	810	820	830
		CAGTCTCTCCACAAAGTACCAAGCCCCGGCTGCACATCGTGGAGGTGAATGATGGAGAGCCA	::::::::::: ::::::::::::::::::::: :: :: ::::::::::::::::::::: :::::				

Fig. 1D

SEQ ID NO:1	HUMAN	850	860	870	880	890	900
		GAGGCAGCCTGCAACGCTTCCAACACGCATATCTTACTTTCCAAGAAACCCAGTCATT					
		::: :	:::::	::: :	::: :::::	::: :::::	::: :::::
SEQ ID NO:3	MOUSE	840	850	860	870	880	890
		GAGGCTGCCTGCAGTGCTTCTAACACACACAGTCTTACTTTCCAAGAGACCCAGTCATT					

  

SEQ ID NO:1	HUMAN	910	920	930	940	950	960
		GCCGTGACTGCCTACCAGAATGCCGAGATTACTCAGCTGAAAATTGATAATAACCCCTTT					
		::	:::::	::	:::	::	:::
SEQ ID NO:3	MOUSE	900	910	920	930	940	950
		GCAGTGACTGCCTACCAGAACGCAGAGATCACTCAGCTGAAAATCGACAACAACCCCTTT					

  

SEQ ID NO:1	HUMAN	970	980	990	1000	1010	1020
		GCCAAAGGATTCCGGGAGAACTTTGAGTCCATGTACACATCTGTTGACACCAGCATCCCC					
		::	:::::	::	:::	::	:::
SEQ ID NO:3	MOUSE	960	970	980	990	1000	1010
		GCCAAAGGATTCCGGGAGAACTTTGAGTCCATGTACGCATCTGTTGATACGAGTGTCCCC					

  

SEQ ID NO:1	HUMAN	1030	1040	1050	1060	1070	1080
		TCCCCGCCTGGACCCAACGTCAATTCCCTGGGGGAGATCACTACTCTCCTCTCCTACCC					
		::	:::	::	:::	::	:::
SEQ ID NO:3	MOUSE	1020	1030	1040	1050	1060	1070
		TCGCCACCTGGACCCAACGTCAACTGCTTGGGGGAGACCCCTCTCACCTCTTCTATCC					

  

SEQ ID NO:1	HUMAN	1090	1100	1110	1120	1130	1140
		AACCA GTAT CCTG TTCCCAGCC GCTT CTA CCCG ACCTT CCTGGCCAGGCGAAGGATGTG					
		::	::::	::	:::	::	:::
SEQ ID NO:3	MOUSE	1080	1090	1100	1110	1120	1130
		AACCA GTAT CCTG TTCCCAGCC GCTT CTA CCCG ACCTT CCAGGCCAGCC AAGGATATG					

  

SEQ ID NO:1	HUMAN	1150	1160	1170	1180	1190	1200
		GTTCCCAGGCTTACTGGCTGGGGCCCCCGGGACACAGCTATGAGGCTGAGTTCGA					
		:	::	::	::	::	::
SEQ ID NO:3	MOUSE	1140	1150	1160	1170	1180	1190
		ATCTCACAGCCTTACTGGCTGGGACACCTCGGGAACACAGTTATGAAGCGGAGTTCCGA					

  

SEQ ID NO:1	HUMAN	1210	1220	1230	1240	1250	1260
		GCAGTCAGCATGAAGCCTGCATTCTGCCCTCTGCCCTGGGCCACCATGTCCTACTAC					
		::	:::	::	:::	::	:::
SEQ ID NO:3	MOUSE	1200	1210	1220	1230	1240	1250
		GCTGTGAGCATGAAGCCCACACTCCTACCCCTCTGCCCTGGGGGCCACTGTGCCCTACTAC					

Fig. 1E

SEQ ID NO:1	HUMAN	1270	1280	1290	1300	1310	1320
		CGAGGCCAGGAGGTCTGGCACCTGGAGCTGGCTGGCCTGGCACCCAGTACCCCTCCC					
SEQ ID NO:3	MOUSE	1260	1270	1280	1290	1300	1310
		CGGGGCCAAGACGTCTGGCGCTGGAGCTGGTGGCCCTCAATACCGCCC					
SEQ ID NO:1	HUMAN	1330	1340	1350	1360	1370	1380
		AAGATGGGCCGGCCAGCTGGTCCGCCATTGCGGACTCTGCCATGGAACCCGGCCCT					
SEQ ID NO:3	MOUSE	1320	1330	1340	1350	1360	1370
		AAGATGAGCCAGCTGGTCCGGCCATGCGAACTCTGCCATGGACCCGGGCCTG					
SEQ ID NO:1	HUMAN	1390	1400	1410	1420	1430	1440
		GGAGGCTCAGAGGGACGGGACCAGAGGACCAAGGGTCCCCCTGGTGTGGACTGAGATT					
SEQ ID NO:3	MOUSE	1380	1390	1400		1410	1420
		GGATCCTCAGAGAACAGGGCTCCT-----CCCCCTCGTGTGGCCTGAGGTC					
SEQ ID NO:1	HUMAN	1450	1460	1470	1480	1490	1500
		GCCCCCATCCGGCCGGAATCCAGTGATTAGCTGGACTGGCGAAGGAGACTCTAAGAGGAGG					
SEQ ID NO:3	MOUSE	1430	1440	1450	1460	1470	1480
		ACCTCCCTCCAGCCGGAGCCCAGCGACTCAGGACTAGGCGAAGGAGACACTAAGAGGAGG					
SEQ ID NO:1	HUMAN	1510	1520	1530	1540	1550	1560
		CGCGTGTCCCCCTATCCTTCCAGTGGTGACAGCTCCTCCCTGCTGGGGCCCTTCTCCT					
SEQ ID NO:3	MOUSE	1490	1500	1510	1520	1530	1540
		AGGATATCCCCCTATCCTTCCAGTGGCGACAGCTCCTCTCCCGCTGGGGCCCTTCTCCT					
SEQ ID NO:1	HUMAN	1570	1580	1590	1600		
		TTTGATAAGGAAGCTGAAGGACAGTTTATACTATTTCCAACTGA					
SEQ ID NO:3	MOUSE	1550	1560	1570	1580	1590	
		TTTGATAAGGAAACCGAAGGCCAGTTTATAATTATTTCCAACTGA					

Fig. 1F

SEQ ID NO:2    HUMAN    10            20            30            40            50            60  
MGIVEPGCGDMLTGTEPM~~P~~GSDEGRAPGADPQHRYFYPEPEGAQDADEERRGGGSLGSPY~~P~~G  
::: :::::::::::::::::::: :::::::::::::::::::: :::::::::::::::::::: :::::::::::::::  
SEQ ID NO:4    MOUSE    10            20            30            40            50  
MGIVEPGCGDMLTGTEPM~~P~~-SDEGRGP~~G~~AQQHRRFFYYPEPEGAQDPTD~~R~~RAGSSLGTPYSG  
10            20            30            40            50  
CONS    MGIVEPGCGDMLTGTEPM~~P~~ SDEGR PGAD QHR FYPEPEGAQD    RR G SLG PY G

SEQ ID NO:2    HUMAN    70            80            90            100            110            120  
GALVPAPP~~S~~RFLGAYAYPPRPQAAGFP~~G~~AGESFPPPADAEGYQP~~G~~E~~G~~YAAPDPRAGLYPG  
::: :::::::::::::::::::: :::::::::::::::::::: :::::::::::::::::::: :::::::::::::::  
SEQ ID NO:4    MOUSE    60            70            80            90            100            110  
GALVPAAPGRFLGSFAYPPRAQVAGFP~~G~~GEFFPPPAGAEGYPPVDGY~~P~~APDPRAGLYPG  
60            70            80            90            100            110  
CONS    GALVPA P RFLG AYPPR Q AGFP~~G~~ GE FPPPA AEGY P GY APDPRAGLYPG

SEQ ID NO:2    HUMAN    130            140            150            160            170            180  
PREDYALPAGLEVSGKL~~R~~VALNNHLLWSKF~~N~~QH~~T~~EMIITKQGRRMFPFLSFTVAGLEPT  
::: :::::::::::::::::::: :::::::::::::::::::: :::::::::::::::::::: :::::::::::::::  
SEQ ID NO:4    MOUSE    120            130            140            150            160            170  
PREDYALPAGLEVSGKL~~R~~VALSNHLLWSKF~~N~~QH~~T~~EMIITKQGRRMFPFLSFTVAGLEPT  
120            130            140            150            160            170  
CONS    PREDYALPAGLEVSGKL~~R~~VAL NHLLWSKF~~N~~QH~~T~~EMIITKQGRRMFPFLSFTVAGLEPT

SEQ ID NO:2    HUMAN    190            200            210            220            230            240  
SHYRMFVDVVLVDQHHWRYQSGK~~W~~VQCGKAEGSMPGNRLYVHPDSPNTGAHWMRQEVSFG  
::: :::::::::::::::::::: :::::::::::::::::::: :::::::::::::::::::: :::::::::::::::  
SEQ ID NO:4    MOUSE    180            190            200            210            220            230  
SHYRMFVDVVLVDQHHWRYQSGK~~W~~VQCGKAEGSMPGNRLYVHPDSPNTGAHWMRQEVSFG  
180            190            200            210            220            230  
CONS    SHYRMFVDVVLVDQHHWRYQSGK~~W~~VQCGKAEGSMPGNRLYVHPDSPNTGAHWMRQEVSFG

SEQ ID NO:2    HUMAN    250            260            270            280            290            300  
KLKL~~T~~NNKGASNNVTQMIVLQL~~S~~HKYQ~~P~~RLHIVEVN~~D~~GEPEAACNASNTHIFTFQETQFI  
::: :::::::::::::::::::: :::::::::::::::::::: :::::::::::::::::::: :::::::::::::::  
SEQ ID NO:4    MOUSE    240            250            260            270            280            290  
KLKL~~T~~NNKGASNNVTQMIVLQL~~S~~HKYQ~~P~~RLHIVEVN~~D~~GEPEAACSASNTHVFTFQETQFI  
240            250            260            270            280            290  
CONS    KLKL~~T~~NNKGASNNVTQMIVLQL~~S~~HKYQ~~P~~RLHIVEVN~~D~~GEPEAAC ASNTH FTFQETQFI

Fig. 1A

SEQ ID NO:2    HUMAN    310    320    330    340    350    360  
**AVTAYQNAEITQLKIDNNPFAKGFRENFESMYTSVDT**SIPSPPGPNCQFLGGDHYSPLLP  
SEQ ID NO:4    MOUSE    300    310    320    330    340    350  
**AVTAYQNAEITQLKIDNNPFAKGFRENFESMYASVDT**SVPSPPGPNCQLLGGDPFSPLLS

CONS    **AVTAYQNAEITQLKIDNNPFAKGFRENFESMY SVDTS PSPPGPNCQ LGGD FSPLL**

SEQ ID NO:2    HUMAN    370    380    390    400    410    420  
**NQYPVPSRFYPDLPQAKDVVPQAYWLGA**PRDH~~SYEAEFR~~VSMKP~~A~~LPSAPGPTMSYY  
SEQ ID NO:4    MOUSE    360    370    380    390    400    410  
**NQYPVPSRFYPDLPQPKDMISQPYWLGT**PREH~~SYEAEFR~~VSMKPTLLPSAPGPTVPYY

CONS    **NQYPVPSRFYPDLPQ KD Q YWLG PR HSYEAEFR**VSMKP LPSAPGPT YY

SEQ ID NO:2    HUMAN    430    440    450    460    470    480  
**RGQEVLAPGAGWPVAPQYPPKM**PASWFRPMRTLPMEPGPGGSEGRGPEDQGPPLVWTEI  
SEQ ID NO:4    MOUSE    420    430    440    450    460    470  
**RGQDV LAPGAGWPVAPQYPPKM**PAGWFRPMRTLPMDPGLGSSEEQG---SSPSLWPEV

CONS    **RGQ VLAPGAGWPVAPQYPPKM PA WFRPMRTLPM PG G SE G P W E**

SEQ ID NO:2    HUMAN    490    500    510    520    530  
**APIRPRESSDSGLGEGDSKRRRVSPY**PSSGDS~~SS~~PAGAPS~~P~~FDKEAEGQFYNTFPN  
SEQ ID NO:4    MOUSE    480    490    500    510    520    530  
**TSLQPEPSDSGLGEGDTKRRRISPY**PSSGDS~~SS~~PAGAPS~~P~~FDKETEGQFYNYFPN

CONS    **PE SDSGLGEGD KRRR SPY**PSSGDS~~SS~~PAGAPS~~P~~FDKE EGQFYNYFPN

Fig. 1B Fig. 1A (continued)

<u>SEQ ID NO:1</u>	HUMAN	ATGGGCATCGTGGAGCCGGGTTGCAGACATGCTGACGGCACCAGCCGATGCCGGGG	10	20	30	40	50	60
<u>SEQ ID NO:3</u>	MOUSE	ATGGGCATCGTGGAGCCGGGCTGCAGACATGCTGACGGCACCAGCCGATGCC---G	10	20	30	40	50	
<u>SEQ ID NO:1</u>	HUMAN	AGCGACGAGGGCCGGCGCCTGGCGCCGACCGCAGCACCGCTACTTCTACCCGGAGCCG	70	80	90	100	110	120
<u>SEQ ID NO:3</u>	MOUSE	AGTGACGAGGGCCGGGGCCGGAGCGGACCAACAGCATCGTTCTTCTATCCCGAGCCG	60	70	80	90	100	110
<u>SEQ ID NO:1</u>	HUMAN	GGCGCGCAGGACGCGGACGAGCGTCGCGGGGGCGGCAGCCTGGGTCTCCCTACCCGGGG	130	140	150	160	170	180
<u>SEQ ID NO:3</u>	MOUSE	GGCGCACAGGACCCGACCGATCGCCCGCGAGGTAGCAGCCTGGGGACGCCCTACTCTGGG	120	130	140	150	160	170
<u>SEQ ID NO:1</u>	HUMAN	GGCGCCTTGGTCCCCGCCCGCCGAGCCGCTTCCTTGGAGCCTACGCCTACCCGCCGGA	190	200	210	220	230	240
<u>SEQ ID NO:3</u>	MOUSE	GCGCCCTGGTGCCTGCCGCCGGTCGCTTCCTGGATCCTCGCCTACCCGCCCGG	180	190	200	210	220	230
<u>SEQ ID NO:1</u>	HUMAN	CCCCAGGCGGCCGGCTTCCCCGGCGCGGGCGAGTCCTCCGCCGCCGGACGCCGAG	250	260	270	280	290	300
<u>SEQ ID NO:3</u>	MOUSE	GCTCAGGTGGCTGGCTTCGGGCTGGCGAGTTCTCCGCCGCCGGGTGCCGGAG	240	250	260	270	280	290
<u>SEQ ID NO:1</u>	HUMAN	GGCTACCAAGCCGGCGAGGGCTACGCCGCCGGACCCGCGCCGGCTCTACCCGGGG	310	320	330	340	350	360
<u>SEQ ID NO:3</u>	MOUSE	GGCTACCCGCCGTGGATGGCTACCCCTGCCCTGACCCGCGCGGGGCTCTACCCAGGG	300	310	320	330	340	350
<u>SEQ ID NO:1</u>	HUMAN	CCGCGTGAGGACTACCGCTACCCCGGGACTGGAGGTGTGGGGAAACTGAGGGTCGCG	370	380	390	400	410	420
<u>SEQ ID NO:3</u>	MOUSE	CCGCGCGAGGACTACGCATTGCCCGGGGTGGAGGTGTGGAAAGCTGAGAGTCGCG	360	370	380	390	400	410

Fig. 1C Fig. 1B

<u>SEQ ID NO:1</u>	HUMAN	430	440	450	460	470	480
		CTCAACAACCACCTGTTGGTCCAAGTTAACATCAGCACCAGACAGAGATGATCATCACC					
<u>SEQ ID NO:3</u>	MOUSE	420	430	440	450	460	470
		CTCAGCAACCACCTGTTGGTCCAAGTTAACCCAGCACCAGACAGAGATGATCATCACT					
<u>SEQ ID NO:1</u>	HUMAN	490	500	510	520	530	540
		AAGCAGGGACGGCGGATGTTCCCATTCTGTCAATTACTGTGGCCGGCTGGAGGCCACC					
<u>SEQ ID NO:3</u>	MOUSE	480	490	500	510	520	530
		AAGCAAGGACGGCGAATGTTCCCATTCTGTCCCTCACCGTGGCCGGCTGGAGGCCACA					
<u>SEQ ID NO:1</u>	HUMAN	550	560	570	580	590	600
		AGCCACTACAGGATGTTGGACGTGGTCTGGTGGACCAGCACCCTGGCGGTACCAAG					
<u>SEQ ID NO:3</u>	MOUSE	540	550	560	570	580	590
		AGCCATTACAGGATGTTGGATGTGGTCTGGTGGACCAGCACCCTGGCGGTACCAAG					
<u>SEQ ID NO:1</u>	HUMAN	610	620	630	640	650	660
		AGCGGCAAGTGGGTGCAGTGTGGAAAGGCCGAGGGCAGCATGCCAGGAACCGCCTGTAC					
<u>SEQ ID NO:3</u>	MOUSE	600	610	620	630	640	650
		AGCGGCAAGTGGGTGCAGTGTGGAAAGGCAGAAGGCAGCATGCCAGGGAACCGCTTATAT					
<u>SEQ ID NO:1</u>	HUMAN	670	680	690	700	710	720
		GTCCACCCGGACTCCCCAACACAGGAGCGCACTGGATGCGCCAGGAAGTTTCATTTGGG					
<u>SEQ ID NO:3</u>	MOUSE	660	670	680	690	700	710
		GTCCACCCAGACTCCCCAACACCGGAGCCACTGGATGCGCCAGGAAGTTTCATTTGGG					
<u>SEQ ID NO:1</u>	HUMAN	730	740	750	760	770	780
		AAACTAAAGCTCACAAACAAGGGGGCTCCAACAATGTGACCCAGATGATTGTGCTC					
<u>SEQ ID NO:3</u>	MOUSE	720	730	740	750	760	770
		AAGCTAAAGCTACCAACAAGGGGGCTCCAACAATGTGACCCAGATGATCGTCCTG					
<u>SEQ ID NO:1</u>	HUMAN	790	800	810	820	830	840
		CAGTCCCTCCATAAGTACCGAGCCCCGGCTGCATATCGTTGAGGTGAACGACGGAGAGCCA					
<u>SEQ ID NO:3</u>	MOUSE	780	790	800	810	820	830
		CAGTCTCTCCACAAAGTACCGAGCCCCGGCTGCACATCGTGGAGGTGAATGATGGAGAGCCA					

Fig. 1D ~~Fig. 1B~~ (continued)

<u>SEQ ID NO:1</u>	HUMAN	850	860	870	880	890	900
		GAGGCAGCTGCAACGCTTCCAACACACGCATATCTTACTTTCCAAGAAACCCAGTCATT					
	MOUSE	840	850	860	870	880	890
<u>SEQ ID NO:3</u>							
		910	920	930	940	950	960
	HUMAN	GCCGTGACTGCCTACCAGAACGAGATTACTCAGCTGAAAATTGATAATAACCCCTTT					
	MOUSE	900	910	920	930	940	950
<u>SEQ ID NO:1</u>	HUMAN	970	980	990	1000	1010	1020
		GCCAAAGGATTCCGGGAGAACCTTGAGTCCATGTACACATCTGTTGACACCAGCATCCCC					
	MOUSE	960	970	980	990	1000	1010
<u>SEQ ID NO:3</u>							
		1030	1040	1050	1060	1070	1080
	HUMAN	TCCCCGCCTGGACCCAACGTCAATTCTGGGGAGATCACTACTCTCCTCTCCTACCC					
	MOUSE	1020	1030	1040	1050	1060	1070
<u>SEQ ID NO:1</u>	HUMAN	1090	1100	1110	1120	1130	1140
		AACCAGTATCCTGTTCCCAGCCGTTCTACCCCGACCTTCTGGCCAGGCGAAGGATGTG					
	MOUSE	1080	1090	1100	1110	1120	1130
<u>SEQ ID NO:3</u>							
		1150	1160	1170	1180	1190	1200
	HUMAN	GTTCCCCAGGCCCTACTGGCTGGGGCCCCGGGACACAGCTATGAGGCTGAGTTCGA					
	MOUSE	1140	1150	1160	1170	1180	1190
<u>SEQ ID NO:1</u>	HUMAN	1210	1220	1230	1240	1250	1260
		GCAGTCAGCATGAAGCCTGCATTCTGCCCTGCCCTGGGCCACCATGTCCTACTAC					
	MOUSE	1200	1210	1220	1230	1240	1250

Fig. 1E Fig. 1B (continued)

<u>SEQ_ID NO:1</u>	HUMAN	1270	1280	1290	1300	1310	1320
		CGAGGCCAGGAGGTCTGGCACCTGGAGCTGGCTGGCCTGTGGCACCCAGTACCCCTCCC					
<u>SEQ_ID NO:3</u>	MOUSE	:: ::::::	:: :::::::	:: :::::::	:: :::	:: :::	:: :::
		CGGGGCCAAGACGTCTGGCGCTGGAGCTGGTTGGCCCCGTGGCCCCCTCAATACCCGCC					
		1260	1270	1280	1290	1300	1310

<u>SEQ ID NO:1</u>	HUMAN	1390	1400	1410	1420	1430	1440
		GGAGGCTCAGAGGGACGGGACCA	GAGGACCAGGGTCCCCCTGGTGTGGACTGAGATT				
<u>SEQ ID NO:3</u>	MOUSE	1380	1390	1400	1410	1420	
		GGATCCTCAGAGAACAGGGCTCCT-----	CCCCCTCGCTGTGGCCTGAGGTC				

<u>SEQ ID NO:1</u>	HUMAN	1450	1460	1470	1480	1490	1500
		GCCCCCATCCGGCCGGAATCCAGTGATTCA	GGACTGGGCGAAGGAGACTCTAAGAGGAGG				
<u>SEQ ID NO:3</u>	MOUSE	::	::	::	::	::	
		ACCTCCCTCCAGCCGGAGCCAGC	GACTCAGGACTAGGC	GAAGGAGACACTAAGAGGAGG			
		1430	1440	1450	1460	1470	1480

<u>SEQ ID NO:1</u>	HUMAN	1510	1520	1530	1540	1550	1560
		CGCGTGTCCTCCCTATCCTTCCAGTGGTGACAGCTCCTCCCTGCTGGGGCCCTTCCT					
		:	:	:	:	:	:
<u>SEQ ID NO:3</u>	MOUSE	1490	1500	1510	1520	1530	1540
		AGGATATCCCCCTATCCTTCCAGTGGCGACAGCTCCTCTCCGCTGGGGCCCTTCCT					

<u>SEQ_ID NO:1</u>	HUMAN	1570	1580	1590	1600
		TTTGATAAGGAAGCTGAAGGACAGTTTATAACTATTTCCCACTGA			
<u>SEQ_ID NO:3</u>	MOUSE	:::::::::::::: : :::::: :::::::::::::: : ::::::::::::::			
		TTTGATAAGGAAACCGAAGGCCAGTTTATAATTATTTCCCACTGA			
		1550	1560	1570	1580
					1590

Fig. 1F Fig. 1B (continued)